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10/697,640	10/31/2003	Stephen Philip Cheatle	1509-456	8492

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INTELLECTUAL PROPERTY ADMINISTRATION  
FORT COLLINS, CO 80527-2400

EXAMINER
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MADDEN, GREGORY VINCENT

ART UNIT	PAPER NUMBER
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2622

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08/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/697,640	<b>Applicant(s)</b> CHEATLE ET AL.	
	<b>Examiner</b> Gregory V. Madden	<b>Art Unit</b> 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 6-8, 11, 16-21, 29 and 31-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10, 12-15, 22-28 and 30 is/are rejected.
- 7) ☒ Claim(s) 34-37 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments with respect to claims 1, 12, 24, and 30 have been considered but are moot in view of the new ground(s) of rejection.

In regard to the above claims, the Applicant has added the limitation of “...*an image storage for recording only the image segment selected to be recorded by the detector arrangement, without recording the other image segment or segments*”, with minor variations in the amendment of claims 12, 24, and 30. The Applicant argues in Pages 15-16 of the Remarks that the Stuttler reference (U.S. Pat. 6,580,448) fails to teach the newly amended limitation. While the Examiner does agree that Stuttler does not teach the above limitation, the Applicant's arguments are moot in view of a new ground of rejection citing Maguire, Jr. (U.s. Pat. 5,734,421). As will be set forth in further detail below, the Examiner believes that the Maguire reference does teach the newly-amended limitations of claims 1, 12, 24, and 30, and thus the claims remain rejected.

Finally, the Examiner further notes that the Applicant has amended claim 28 to overcome the previous 35 U.S.C. 112, second paragraph rejection. Thus, the rejection of claim 28 under 35 U.S.C. 112, second paragraph is hereby withdrawn. Also, the Examiner notes that dependent claims 34-37 have been added to the application, and claim 9 has been canceled.

Please refer to the action on the remaining (and non-withdrawn) claims below.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-5, 12-15, 22, 24-26, and 30 rejected under 35 U.S.C. 102(b) as being anticipated by Maguire, Jr. (U.S. Pat. 5,734,421).**

First, considering **claim 1**, the Maguire reference teaches an apparatus for controlling an recording of an image of a scene viewed by a person, the apparatus comprising an optical sensor arrangement (cameras 5 and 6) for simultaneously deriving image segments corresponding with images of a scene seen by the person (i.e. cameraman using helmet 3) looking (a) forward of his head and (b) to at least one side of his head, a detector arrangement (left eye monitor 10b and right eye monitor 10c) for controlling which of said image segments is to be recorded dependent on an estimation of the pointing direction of the eyes of the person (as illustrated in Fig. 8), and an image storage (storage 11) for recording only the image segment selected to be recorded by the detector arrangement (e.g. image segments 138, 136, 134, and 132 in Fig. 8), without recording the other image segment or segments (i.e. only recording the image in the region on which the cameraman is focuses). Please refer to Figs. 1, 5, and 8, and Col. 8, Line 32 – Col. 9, Line 40, Col. 10, Lines 11-16, Col. 11, Lines 12-31, and Col. 15, Line 25 – Col. 16, Line 28.

Regarding **claim 2**, the limitations of claim 1 are set forth above, and Maguire further discloses that the optical sensor arrangement (arrangement of cameras 5 and 6) is arranged for simultaneously deriving image segments (i.e. the image segments illustrated in Fig. 8) corresponding with images of scenes seen by the person (e.g. the cameraman) simultaneously looking to both sides of his head. Please refer to Figs. 1, 5, and 8, and Col. 15, Line 25 – Col. 16, Line 28.

As for **claim 3**, the limitations of claim 2 are set forth above, and Maguire also teaches that at least a portion of the optical sensor arrangement (arrangement of cameras 5 and 6) is adapted to be worn by the person (i.e. worn by the cameraman on helmet 3) and to turn with the turning of the head of the person. Please refer to Figs. 1 and 5, and Col. 5, Lines 19-26.

Considering **claim 4**, the limitations of claim 2 are again set forth above, and Maguire further shows that the optical sensor arrangement (arrangement of cameras 5 and 6) includes plural separate sensors (separate cameras 5 and 6) arranged to have different fields of view (i.e. arranged to view from the cameraman's left and right eyes, respectively) corresponding approximately with scenes the person sees looking forward and to both sides of his head. Please refer to Figs. 1 and 5, as well as Col. 5, Lines 19-26.

In regard to **claim 5**, the limitations of claim 4 are taught above, and Maguire also teaches that the plural optical sensors (cameras 5 and 6) are adapted to be worn by the person (i.e. the cameraman) and to turn with turning of the head of the person. Please refer to Figs. 1 and 5, and Col. 5, Lines 19-26.

Next, considering **claim 12**, the Maguire reference teaches an apparatus for controlling an recording of an image of a scene viewed by a person, the apparatus comprising an optical sensor arrangement (cameras 5 and 6) including plural optical sensors for images corresponding with images of a scene seen by the person (i.e. cameraman using helmet 3) looking forward of his head and to at least one side of his head, a detector arrangement, including a sensor for the rotation of the head of the person (head attitude monitor 9) for controlling which of said image is to be recorded (as illustrated in Fig. 8), and an image storage (storage 11) for recording only the images selected to be recorded by the detector arrangement (e.g. images 138, 136, 134, and 132 in Fig. 8), without recording the other images (i.e. only recording the image in the region on which the cameraman is focuses). Please refer to Figs. 1, 5, and 8, and Col. 5, Lines 19-50, Col. 8, Line 32 – Col. 9, Line 40, Col. 10, Lines 11-16, Col. 11, Lines 12-31, and Col. 15, Line 25 – Col. 16, Line 28.

As for **claim 13**, the limitations of claim 12 are set forth above, and Maguire further discloses that the optical sensor arrangement (arrangement of cameras 5 and 6) is arranged for simultaneously deriving image segments (i.e. the image segments illustrated in Fig. 8) corresponding with images of scenes seen by the person (e.g. the cameraman) looking forward of his head and to at least one side of his head.

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Please refer to Figs. 1, 5, and 8, and Col. 15, Line 25 – Col. 16, Line 28. Further, Maguire shows in Col. 9, Lines 33-40 that the attitude (i.e. the angle) of the optical sensors (or cameras 5 and 6) can be controlled to be different, and thus the fields of view of the cameras can inherently be unparallel fields of view.

In regard to **claim 14**, the limitations of claim 12 are set forth above, and Maguire further discloses that the optical sensor arrangement (arrangement of cameras 5 and 6) is arranged for simultaneously deriving image segments (i.e. the image segments illustrated in Fig. 8) corresponding with images of scenes seen by the person (e.g. the cameraman) looking forward of his head and to both sides of his head. Please refer to Figs. 1, 5, and 8, and Col. 15, Line 25 – Col. 16, Line 28. Further, Maguire shows in Col. 9, Lines 33-40 that the attitude (i.e. the angle) of the optical sensors (or cameras 5 and 6) can be controlled to be different, and thus the fields of view of the cameras can inherently be unparallel fields of view.

Considering **claim 15**, again the limitations of claim 12 are taught above, and Maguire also teaches that the plural optical sensors (cameras 5 and 6) are adapted to be worn by the person (i.e. the cameraman) and to turn with turning of the head of the person. Please refer to Figs. 1 and 5, and Col. 5, Lines 19-26.

As for **claim 22**, again the limitations of claim 12 are taught above by Maguire, and Maguire further discloses that the optical sensor arrangement (arrangement of cameras 5 and 6) includes first and second optical sensors (cameras 5 and 6, respectively) positioned so that they have different fields of view so that the first optical sensor (e.g. camera 5) is arranged to be responsive to images corresponding with images of scenes seen by the person looking forward of his head, and the second optical sensor (e.g. camera 6) is arranged to be responsive to images corresponding with images of scenes seen by the person looking to a first side of his head. Please note that either camera 5 or camera 6 can view scenes both looking forward of a user's head and looking to a side of a user's head. See Figs. 1, 5, and 8, and Col. 15,

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Line 25 – Col. 16, Line 28. Further, Maguire shows in Col. 9, Lines 33-40 that the attitude (i.e. the angle) of the optical sensors (or cameras 5 and 6) can be controlled to be different, and thus the fields of view of the cameras can inherently be unparallel fields of view.

Next, regarding **claim 24**, the Maguire reference teaches a method of recording an image of scenes viewed by a person (i.e. a cameraman) by using an optical sensor arrangement that simultaneously derives image segments corresponding with images of scenes seen by the person looking (a) forward of his head and (b) to at least one side of his head, the method comprising the steps of controlling (via encoder 7) which of the image segments is to be recorded in response to an estimate of the pointing direction of the eyes of the person (estimated using left eye monitor 10b and right eye monitor 10c), and recording only the image segment selected in the controlling step, without recording the other image segment or segments (i.e. only recording the image in the region on which the cameraman is focuses). Please refer to Figs. 1, 5, and 8, and Col. 8, Line 32 – Col. 9, Line 40, Col. 10, Lines 11-16, Col. 11, Lines 12-31, and Col. 15, Line 25 – Col. 16, Line 28.

Considering **claim 25**, the limitations of claim 24 are taught above, and Maguire further discloses that the optical sensor arrangement (arrangement of cameras 5 and 6) is arranged for simultaneously deriving image segments (i.e. the image segments illustrated in Fig. 8) corresponding with images of scenes seen by the person (e.g. the cameraman) simultaneously looking to both sides of his head and the recording step records only one of the images (i.e. one of the images shown in Fig. 8). Please refer to Figs. 1, 5, and 8, and Col. 15, Line 25 – Col. 16, Line 28.

In regard to **claim 26**, the limitations of claim 25 are set forth above, and Maguire further discloses that the optical sensor arrangement (arrangement of cameras 5 and 6) is arranged for simultaneously deriving image segments (i.e. the image segments illustrated in Fig. 8) corresponding with images of scenes seen by the person (e.g. the cameraman) looking forward of his head and to both sides of his head. Please refer to Figs. 1, 5, and 8, and Col. 15, Line 25 – Col. 16, Line 28. Further, Maguire

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shows in Col. 9, Lines 33-40 that the attitude (i.e. the angle) of the optical sensors (or cameras 5 and 6) can be controlled to be different, and thus the fields of view of the cameras can inherently be unparallel fields of view.

Finally, considering **claim 30**, the Maguire reference teaches a method of recording of an image of a scene viewed by a person, the method comprising an optical sensor arrangement (cameras 5 and 6) including plural optical sensors for images corresponding with images of a scene seen by the person (i.e. cameraman using helmet 3) looking forward of his head and to at least one side of his head, a detector arrangement, including a sensor for the rotation of the head of the person (head attitude monitor 9) for controlling which of said image is to be recorded (as illustrated in Fig. 8), and an image storage (storage 11) for recording only the images selected to be recorded by the detector arrangement (e.g. images 138, 136, 134, and 132 in Fig. 8), without recording the other images (i.e. only recording the image in the region on which the cameraman is focuses). Please refer to Figs. 1, 5, and 8, and Col. 5, Lines 19-50, Col. 8, Line 32 – Col. 9, Line 40, Col. 10, Lines 11-16, Col. 11, Lines 12-31, and Col. 15, Line 25 – Col. 16, Line 28.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 10 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maguire, Jr. (U.S. Pat. 5,734,421) in view of Mann (U.S. Pat. 6,307,526).**



In regard to **claim 10**, the limitations of claim 1 are set forth above, and while the Maguire reference does teach the storing of plural sequential images corresponding with images of scenes seen by the person looking forward of his head and to at least one side of his head (see Col. 8, Line 32 – Col. 9, Line 40, Col. 10, Lines 11-16, Col. 11, Lines 12-31, and Col. 15, Line 25 – Col. 16, Line 28), Maguire fails to teach the changing of which of the stored plural sequential images in a buffer memory is transferred to the recorder immediately prior to and subsequent to the head of the person turning. However, the Mann reference teaches an optical sensor arrangement (cameras 110 and 120) that capture and store plural sequential images corresponding with images of scenes seen by a person looking forward of his head and to a side of his head, wherein the stored plural sequential images are stored in a buffer memory (circular buffer) and are selected to be transferred to a recorder at any point prior to or subsequent to the head of the person turning, as the person selects when the images stored in the buffer memory are transferred. Please refer to Fig. 1, Col. 3, Lines 33-45, Col. 6, Lines 22-34, and Col. 11, Lines 30-38. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the temporary storing of images in a buffer memory, as taught by Mann, with the method of storing plural sequential images of Maguire. One would have been motivated to do so because by storing the plural sequential images in a buffer memory and selecting which of the images stored in the buffer memory are transferred to the recorder, no events which the user or another viewer may want to capture are missed, as taught by Mann in Col. 3, Lines 33-45.

As for **claim 28**, the limitations of claim 24 are set forth above by Maguire, and as is similarly shown with respect to claim 10 above, the Maguire reference does teach the storing of plural sequential images corresponding with images of scenes seen by the person looking forward of his head and to at least one side of his head (see Col. 8, Line 32 – Col. 9, Line 40, Col. 10, Lines 11-16, Col. 11, Lines 12-31, and Col. 15, Line 25 – Col. 16, Line 28), Maguire fails to teach the changing of which of the stored plural sequential images in a buffer memory is transferred to the recorder immediately prior to and

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subsequent to the head of the person turning. However, the Mann reference teaches an optical sensor arrangement (cameras 110 and 120) that capture and store plural sequential images corresponding with images of scenes seen by a person looking forward of his head and to a side of his head, wherein the stored plural sequential images are stored in a buffer memory (circular buffer) and are selected to be transferred to a recorder at any point prior to or subsequent to the head of the person turning, as the person selects when the images stored in the buffer memory are transferred. Please refer to Fig. 1, Col. 3, Lines 33-45, Col. 6, Lines 22-34, and Col. 11, Lines 30-38.

**Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maguire, Jr. (U.S. Pat. 5,734,421) in view of Campbell (U.S. Pat. 4,516,157).**

Considering **claim 23**, the limitations of claim 12 are taught above, and while the Maguire reference does teach that the optical sensor arrangement includes first and second optical sensors (cameras 5 and 6, as shown in Figs. 1 and 5), Maguire does not explicitly teach that the optical sensor arrangement includes first, second and third optical sensors, the first sensor being arranged to capture images of scenes seen by the person looking forward of his head, the second sensor capturing images seen by the person looking to a first side of his head, and the third sensor capturing images seen by the person looking to a second side of his head. However, the Campbell reference teaches an optical sensor arrangement that includes a first sensor (CCD 20), a second sensor (CCD 48) and a third sensor (also CCD 48), each sensor positioned to have different fields of view (as shown in Fig. 3). Please refer to Figs. 1-3, Col. 2, Lines 46-51, and Col. 3, Lines 49-59. It would have been obvious to one of ordinary skill in the art to have included a third optical sensor, as is shown by Campbell, to the optical sensor arrangement of Maguire. One would have been motivated to do so because a geometric correction is needed when the optical sensors are located on each sides of the person's head so as to accurately capture and focus on the scene that the person is actually viewing. A third optical sensor between the sensors on

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either side of the person's head would greatly reduce the correction calculation and thus record an image that more accurately portrays what the person is viewing.

**Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maguire, Jr. (U.S. Pat. 5,734,421) in view of Stuttler (U.S. Pat. 6,580,448).**

Finally, considering **claim 27**, the limitations of claim 24 are taught above by Maguire, and while the Maguire reference does teach the optical sensor arrangement (arrangement of cameras 5 and 6) includes plural separate sensors (separate cameras 5 and 6) arranged to have different fields of view (i.e. arranged to view from the cameraman's left and right eyes, respectively) corresponding approximately with scenes the person sees looking forward and to both sides of his head, wherein only a portion of the field of view is selected in response to the control of a detector arrangement (eye attitude detection using left eye monitor 10b and right eye monitor 10c) (See Figs. 1, 5, and 8, and Col. 5, Lines 19-50, Col. 8, Line 32 – Col. 9, Line 40, Col. 10, Lines 11-16, Col. 11, Lines 12-31, and Col. 15, Line 25 – Col. 16, Line 28), Maguire does not specifically disclose that the arrangement includes a wide-angle lens having a field of view corresponding with scenes seen by the person looking forward of his head and to both sides of his head. However, noting the Stuttler reference, Stuttler teaches an optical sensor arrangement that can include a wide-angle lens (wide-angle optical system) having a field of view corresponding with scenes seen by the person looking forward of his head and to both sides of his head, the method comprising selecting only a portion of the wide angle lens field of view in response to the control of the detector arrangement. Please refer to Col. 3, Lines 37-45. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the wide-angle lens of Stuttler with the optical arrangement of Maguire, as it is well known in the art that a wide angle lens will capture a field of view similar to that of the human vision system, and thus by incorporating wide angle lens, the viewer will see the scene that is most similar to that seen by the cameraman.

*Allowable Subject Matter*

Claims 34-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding **claim 34**, further in view of the limitations of claim 12, the prior art was not found to teach or reasonably suggest that the detector arrangement is configured to select a first image corresponding to the scene seen by the person looking forward of his head until the sensor detects rotation of the head of the person to at least one side of the head, selecting a second image corresponding to the scene seen by the person looking to at least one side of his head for recording, and then re-selecting the first image if it is determined by the sensor that the return rotation of the head of the person is not detected within a predetermined time period.

As for **claim 35**, further in view of the limitations of claim 1, the prior art was not found to teach or reasonably suggest that the apparatus comprises a buffer memory for temporarily storing plural sequential images, wherein the apparatus comprises a switch between the buffer memory and the image storage that is controlled by the detector arrangement to output a delayed replica of the image segment, selected to be recorded by the detector arrangement, from the buffer memory to the image storage for recording therein.

Considering **claim 36**, further in view of the limitations of claim 30, the prior art was not found to teach or reasonably suggest that the method further comprises switching from selecting and recording a first image corresponding to the scene seen by the person looking in a first direction to selecting and recording a second image corresponding with the scene seen by the person looking in a second, different direction, upon detecting a rotation of the person's head from the first to the second direction, and then

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automatically switching back to select and record the first image when the return rotation of the head from the second direction to the first direction is not detected within a predetermined time period.

Finally, in regard to **claim 37**, further in view of the limitations of claim 24, the prior art was not found to teach or reasonably suggest that the method includes temporarily storing plural sequential images from the simultaneously derived image segments corresponding with images of scenes seen by the person looking forward of his head and to at least one side of his head, and recording a delayed replica of the image selected to be recorded in the controlling step.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory V. Madden whose telephone number is 571-272-8128. The examiner can normally be reached on Mon.-Fri. 8AM-5PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc Yen Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gregory Madden  
August 16, 2007



NGOC-YEN VU  
SUPERVISORY PATENT EXAMINER